

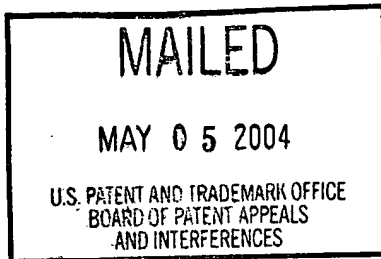
The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte STEPHEN JOHN RUIZ



Appeal No. 2004-0998
Application No. 09/716,113

ON BRIEF

Before FRANKFORT, McQUADE, and NASE, Administrative Patent Judges.
NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 3, 5, 6, 21, 23, 25 and 26.¹ Claims 4, 7 to 20, 24 and 27 to 40 have been withdrawn from consideration. Claims 2 and 22 have been canceled.

We REVERSE.

¹ Claims 1 and 21 were amended subsequent to the final rejection.

BACKGROUND

The appellant's invention relates to improved air flow motion over a disk brake rotor system used in a vehicle through aerodynamic standoffs (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellant's brief.

Claims 1, 3, 5, 6, 21, 23, 25 and 26 stand rejected under 35 U.S.C. § 103 as being unpatentable over the Admitted Prior Art² in view of Shimazu et al.³ (Shimazu).

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejection, we make reference to the answer (Paper No. 18, mailed March 6, 2003) for the examiner's complete reasoning in support of the rejection, and to the brief (Paper No. 17, filed December 31, 2002) for the appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art, and to the respective positions articulated by the appellant and the examiner. Upon evaluation of all the

² The appellant admitted that Figures 1-2 of the application were prior art (specification, page 4, line 6, to page 5, line 13).

³ U.S. Patent No. 5,427,212 issued June 27, 1995.

evidence before us, it is our conclusion that the evidence adduced by the examiner is insufficient to establish a prima facie case of obviousness with respect to the claims under appeal. Accordingly, we will not sustain the examiner's rejection of claims 1, 3, 5, 6, 21, 23, 25 and 26 under 35 U.S.C. § 103. Our reasoning for this determination follows.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established by presenting evidence that would have led one of ordinary skill in the art to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988) and In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

Claims 1 and 21, the only independent claims on appeal, read as follows:

1. A mounting hat for a brake rotor comprising:
a lower section coupled to an upper section,
a plurality of aerodynamically shaped standoff vanes each having a leading edge, a trailing edge, a top, and a bottom coupled to the upper section, the aerodynamically shaped standoff vanes space apart the upper section from a brake rotor, wherein the leading edge and the trailing edge are curved; and
a plurality of vents formed between adjacent aerodynamically shaped standoff vanes, wherein the vents are circumferentially distributed on the upper section, and air located within said mounting hat and air deflected from said brake rotor are induced to substantially flow through the plurality of vents in a

direction outward from a radial interior of said mounting hat to a radial exterior of said mounting hat.

21. A brake rotor comprising:
a rotor,
a hub coupled to the rotor, said hub having a plurality of aerodynamically shaped standoff vanes each having a leading edge, a trailing edge, a top, a bottom and a plurality of vents formed between adjacent aerodynamically shaped standoff vanes, wherein the vents are circumferentially distributed between the hub and the rotor, air located within said hub and air deflected from said rotor are induced to substantially flow through the plurality of vents in a direction outward from a radial interior of said hub to a radial exterior of said hub, the aerodynamically shaped standoff vanes space apart the hub from the rotor, and the leading edge and the trailing edge are curved.

In the rejection of claims 1 and 21 before us in this appeal, the examiner (answer, pp. 3-4) determined that Figure 2 of the Admitted Prior Art shows a mounting hat 120 for a brake rotor 110 (shown in Figure 1) comprising: a lower section (not numbered) coupled to an upper section (not numbered); a plurality of aerodynamically shaped standoff vanes 126 each having a leading edge, a trailing edge, a top and a bottom coupled to the upper section, the aerodynamically shaped standoff vanes space apart the upper section from the brake rotor; and a plurality of vents 132 formed between adjacent aerodynamically shaped standoff vanes, wherein the vents are circumferentially distributed on the upper section, and air flow is induced to flow through the plurality of vents. The examiner then noted that the term "aerodynamic" has been

treated broadly.⁴ Next, the examiner ascertained⁵ that the Admitted Prior Art lack the leading edge and the trailing edge being curved. The examiner then stated that Shimazu teaches

the concept of providing a curving design in place of a straight design to improve airflow to increase heat removal. This concept is illustrated in figures 1 and 5 where vanes 22 has a curved design instead of a straight design of vanes F in order to improve air flow to increase heat removal. Shimazu et al. explain this concept further in column 1, lines 12-46 and column 2, lines 52-57.

Lastly, the examiner concluded that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the standoff vanes of the Admitted Prior Art to include a curved design as suggested and taught by Shimazu.

We do not agree with the examiner that the subject matter of claims 1 and 21 would have been obvious at the time the invention was made to a person of ordinary skill in the art from the combined teachings of the Admitted Prior Art and Shimazu. In that regard, Shimazu does not teach the concept of providing a curving design in place of a straight design to improve airflow to increase heat removal but instead teaches replacing straight partition walls F formed in a brake disc rotor with long and short partition walls in the form of curved fins to improve the blowing and cooling efficiency of

⁴ The appellant's specification states (p. 5) that the standoffs 126 of the Admitted Prior Art are "not aerodynamically shaped."

⁵ After the scope and content of the prior art are determined, the differences between the prior art and the claims at issue are to be ascertained. Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).

the rotor. Thus, Shimazu would have made it obvious at the time the invention was made to a person of ordinary skill in the art to have modified the brake rotor of the Admitted Prior Art, not the standoffs vanes of the mounting hat. The mere fact that the prior art could be modified in the manner suggested by the examiner does not make such a modification obvious unless the prior art suggested the desirability of the modification. See In re Gordon, 773 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

In our view, the only suggestion for modifying the Admitted Prior Art in the manner proposed by the examiner to arrive at the claimed invention stems from hindsight knowledge derived from the appellant's own disclosure. The use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is, of course, impermissible. See, for example, W. L. Gore and Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

For the reasons set forth above, the decision of the examiner to reject claims 1 and 21, and claims 3, 5, 6, 23, 25 and 26 dependent thereon, under 35 U.S.C. § 103 is reversed.

To summarize, the decision of the examiner to reject claims 1, 3, 5, 6, 21, 23, 25 and 26 under 35 U.S.C. § 103 is reversed.

REVERSED

JEFFREY V. NASE
Administrative Patent Judge

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